AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (currently amended) A probe for at least one of: intravascular stimulation, cardioversion and defibrillation of a heart with an electrical or magnetic pulse or shock generated by a stimulation unit, said probe comprising:

a metallic, electrically conductive tubular wire unit, having an interior lumen; and

a feed line, arranged in axial succession with and connected to an end of the wire unit, such that the feed line electrically communicates the stimulation unit to the wire unit;

wherein the wire unit is adapted to be deployed in the blood vessel in a first state and expanded into a second state in which the wire unit is adapted to be in electrically conductive relationship with an interior wall of the blood vessel having a cross-sectional area along an entire length of the wire unit, and

wherein, in the second state, the probe does not project radially into the lumen along the length of the wire unit in a manner that reduces the cross-sectional area of the blood vessel;

and wherein the wire unit comprises a plurality of portions, the portions being electrically insulated from each other.

2. (previously presented) The probe as set forth in claim 1, further comprising:

an inflatable balloon body for expanding the wire unit from the first state to the second state, the wire unit being plastically deformable.

3. (previously presented) The probe as set forth in claim 1 wherein the wire unit resiliently self-expands from a pre-stressed compressed condition in the first state to the second state inside the vessel.

4. (previously presented) The probe of claim 1 wherein the stimulation unit stimulates, in a unipolar manner, the entire surface of the wire unit.

5. (previously presented) The probe of claim 1 wherein the wire unit is a cylindrical coil.

6 (previously presented) The probe of claim 5 wherein the cylindrical coil comprises a plurality of coil portions, the portions being electrically insulated from each other.

7. (previously presented) The probe of claim 5 wherein an induction unit, comprising an induction coil, inductively supplies the electrode with voltage.

8. (previously presented) The probe of claim 1 wherein a radial diameter of the wire unit changes in a longitudinal direction thereof.

9. (previously presented) The probe of claim 8, wherein the wire unit is of a conical configuration.

10. (previously presented) The probe of claim 1 wherein a surface of the wire unit is coated with a medicament.

11. (previously presented) The probe of claim 7 wherein the induction unit inductively heats the electrode.

12. (previously presented) The probe of claim 1 wherein a further portion of the feed line extends in the axial direction parallel at least to a portion of the wire unit, such portion in electrically insulated relationship therewith.

13. (previously presented) The probe of claim 1, further comprising a control unit that is electrically communicated to the wire unit and that provides at least one control signal thereto.

14. (previously presented) The probe of claim 2 wherein the balloon body is adapted to be pneumatically inflatable.

15. (previously presented) The probe of claim 2 wherein the balloon body is adapted to be hydraulically inflatable.

16. (previously presented) The probe of claim 6 wherein an induction unit, comprising an induction coil, inductively supplies the electrode with voltage.

17. (previously presented) The probe of claim 10 wherein the medicament is a substance for preventing vessel damage.

18. (previously presented) The probe of claim 1 wherein the entire surface of the wire unit is divided into at least two electrically mutually insulated portions to provide a multipolar stimulation pole.

19. (currently amended) ~~The probe of claim 1,~~ A probe for at least one of: intravascular stimulation, cardioversion and defibrillation of a heart with an electrical or magnetic pulse or shock generated by a stimulation unit, said probe comprising:

a metallic, electrically conductive tubular wire unit, having an interior lumen; and

a feed line, arranged in axial succession with and connected to an end of the wire unit, such that the feed line electrically communicates the stimulation unit to the wire unit, wherein the feed line is terminated with a ring to form a bipolar reference electrode;

wherein the wire unit is adapted to be deployed in the blood vessel in a first state and expanded into a second state in which the wire unit is adapted to be in electrically conductive relationship with an interior wall of the blood vessel having a cross-sectional area along an entire length of the wire unit, and

wherein, in the second state, the probe does not project radially into the lumen along the length of the wire unit in a manner that reduces the cross-sectional area of the blood vessel.